

U.S. Department of Justice
Drug Enforcement AdministrationSouth Central Laboratory
Dallas, TX

Chemical Analysis Report

ICE - Brownsville Office
1800 Paredes Line Road
Brownsville, TX 78521Case Number: [REDACTED]
LIMS Number: 2019-SFL6-05255

Observations, Results and Conclusions:

Exhibit	Substance(s) Identified	Net Weight	Substance Purity	Amount Pure Substance
1	Cocaine Hydrochloride	10044.4 g \pm 0.6 g	----	----

Remarks:

The net weight was determined by direct weighing of all unit(s); the net weight uncertainty value represents an expanded uncertainty estimate at the 95% level of confidence.

Exhibit Details:

Date Accepted by Laboratory: 07/23/2019

Gross Weight: 11.74 kg

Date Received by Examiner: 10/15/2019

Exhibit	No. Units	Pkg. (Inner)	Form	Reserve Wt.
1	10	Multilayered Packaging	Powder	10039.1 g

Remarks:

Original packaging separated and returned to ICE for latent print examination.

1.0 gram removed from each of 3 containers for special program.

Exhibit Analysis:

Sampling:

Cocaine confirmed in 9 units tested of 10 units received indicating, to at least a 95% level of confidence, that at least 90% of the units in the population contain the substance(s). A composite was formed from 10 units for further testing. Salt form determined from testing the composite.

Exhibit	Summary of Test(s)
1	Gas Chromatography/Mass Spectrometry, Infrared Spectroscopy, Scott's Color Test

The terminology used in the preparation of this report is consistent with the current Department of Justice Uniform Language for Testimony and Reports for General Forensic Chemistry and Seized Drug Examinations.

Analyzed By: /S/ Xiu Liu, Senior Forensic Chemist
Approved By: /S/ Charity M. Foreman, Senior Forensic ChemistDate: 10/16/2019
Date: 10/16/2019



Xiu Liu, PhD.
Department of Justice
Drug Enforcement Administration
Office of Forensic Science

Senior Forensic Chemist
South Central Laboratory
Dallas, Texas

AREA OF EXPERTISE

Forensic Discipline

Seized Drug Analysis

Expert Testimony

Testified approximately 30 times. Past four years as follows:

06/14/2022	Southern District of Texas	Brownsville, Texas	US v Felix Lerma
02/15/2022	Circuit Court of the County of Jefferson Davis	Prentiss, Mississippi	Mississippi vs Jones
07/27/2021	Eastern District of Arkansas	Little Rock, Arkansas	US v Camrron Bryant

PROFESSIONAL EXPERIENCE

Drug Enforcement Administration

Senior Forensic Chemist, South Central Laboratory (Dallas, TX), 2016-Present

Forensic Chemist, South Central Laboratory (Dallas, TX), 2006-2016

- Analyze evidence for the absence or presence of controlled substances utilizing a combination of wet chemistry and instrumental techniques.
- Provide expert testimony in federal and state courts based on conclusions obtained from my analysis.
- Assist local law enforcement officers on trace evidence collections and clandestine laboratory investigations.
- Troubleshoot and maintain scientific equipment.
- Analyzed more than 4000 exhibits.

Training

On the job training, South Central Laboratory (Dallas, Texas), 06/2006-12/2006

Basic Forensic Sciences School, Clandestine Laboratory Certified, Quantico, VA, 06/2007

EDUCATION AND CERTIFICATIONS

Texas A&M University (College Station, TX)

- PhD, Chemistry, 1993

Fudan University (Shanghai, China)

- B.S., Radiochemistry, 1982

SUBJECT: RULE 16(a)(1)(G) SUMMARY OF TESTIMONY IN UNITED STATES v.
Debra Mercer, ET. AL.

DEA LIMS Case Number(s): 2019-SFL6-05255

4. I analyzed the material contained in the exhibit(s) which were submitted for analysis in the above referenced case number(s). My conclusions are included as part of the attached forensic laboratory report(s) and analysts notes.
5. The analytical methods used in the analyses are validated and verified according to our assurance policy to ensure the methods are reliable and fit-for-purpose and the techniques utilized are widely accepted and employed in the scientific and forensic community. Summaries of instrumental methods are available at:

https://www.dea.gov/resources/documents?f%5B0%5D=publication_type%3A2596

Pursuant to Fed. R. Crim. P. 16(a)(1)(G)(v), I approve the foregoing disclosure.



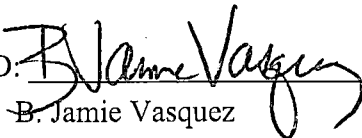
Xiu Liu

Senior Forensic Chemist

April 4, 2023

Date

APPROVED:



B. Jamie Vasquez

Associate Laboratory Director

Attachments



U. S. Department of Justice
Drug Enforcement Administration
South Central Laboratory
10150 Technology Blvd., E.
Dallas, Texas 75220

www.dea.gov

April 4, 2023

TO: Heather Rattan
Assistant United States Attorney

FROM: Xiu Liu
Senior Forensic Chemist

SUBJECT: RULE 16(a)(1)(G) SUMMARY OF TESTIMONY IN UNITED STATES v.
Debra Mercer, ET. AL.

Reference Laboratory Report(s) and Analyst Notes for DEA LIMS Case Number(s):
2019-SFL6-05255

The following summary of testimony is provided as required by Federal Rule of Criminal Procedure 16(a)(1)(G) and is a complete statement of my opinions, which are exclusive to and address only the exhibit(s) identified in this summary:

1. My name is: Xiu Liu
2. I am employed by the U.S. Department of Justice, Drug Enforcement Administration (DEA), in the capacity of forensic chemist, and was so employed when I conducted the examinations and analyses described in the attached laboratory report(s) and analyst notes. My qualifications to conduct the examinations and analyses, and to express an opinion as to the identity of the material contained in the exhibit(s) described in the attached laboratory report(s), are based on my knowledge, skill, experience, training, and education. See my attached Curriculum Vitae for additional information regarding my qualifications, including previous testimony offered in the last four years and any publications authored in the last ten years.
3. The opinions described in the attached laboratory report(s) and analyst notes are based on chemical, physical, and instrumental analyses, the results generated by those analyses, and my interpretation of those results set forth in the attached laboratory report(s) and analyst notes. The manner and process by which I performed the analyses were, to the best of my knowledge, in accordance with the publicly available Analysis of Drugs Manual (ADM) and Laboratory Operations Manual (LOM), in effect at the time of analysis. These are generally available at:

https://www.dea.gov/resources/documents?f%5B0%5D=publication_type%3A2596, or were otherwise disclosed upon request.

Case Details Report» **I.A. Case #: REDACTED / LIMS Case #: 2019-SFL6-05255****Investigating Agency: ICE - Brownsville Office****# of I.A. Exhibits: 1****# of Lab Exhibits: 4**

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	10 bundle(s) containing white powder	SSEE (1507331)

Gross Weight Equipment : DEA 361249		Analyst: XNLIU (2019.10.16)
Gross Weight (Reported)	11.65 kg	
Gross Weight (Actual)	11741 g	
Gross Weight (delta)	91 g	
Gross Weight (delta %)	0.78 %	
Weight Discrepancy	Yes	
Discrepancy Witness	PORLANDO	
Remarks	No Remarks	

Description of Evidence		Analyst: XNLIU (2019.10.16)
Seals	Intact	
Date Opened	2019-10-15	
Description	One SSEE containing 10 bundle(s) containing white powder wrapped with food saver bags, aluminum foil, black rubber, clear plastics, carbon paper, clear and brown duct tapes.	
Consistent With Paperwork?	Yes	
Remarks	Photos taken	

Description of Exhibit and Sampling		Analyst: XNLIU (2019.10.16)
Number of Packages	10 unit	
Number of Units	10 unit	
Package Type	Multilayered Packaging	
Logo/Impression	Yes	
Gross Form	Powder	
Dry/Moist	Dry	
Exemplar	No	
Required Number of Units to Test	9 unit	
Number of Units Tested	9 unit	
Sampling Procedure	9 samples (Lottery Method B) screened with GC/MS, color test; a composite was formed from the 10 units with 1 g increment, > 15 g; ground, sieved through 20-mesh, mixed well for further analysis; IR, GC/MS	
Deviation from Sampling Plan	No	
Remarks	No Remarks	

» I.A. Case #: REDACTED / LIMS Case #: 2019-SFL6-05255

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	10 bundle(s) containing white powder	SSEE (1507331)

Net Weight		Analyst: XNLIU (2019.10.16)
Equipment : DEA 361267		
Residue	No	
Type of Weighing	Direct Weighing	
Net Weight	10044.4 g	
Net Weight Uncertainty	0.6 g	
Remarks	10 new zpbs	
Use Legacy Calculator	No	

GC-MS Analysis : Run # 1 - Set # 1 0 0		Analyst: XNLIU (2019.10.16)
Equipment : DEA 361346		
Negative Control Run	Yes	
Negative Control Type	Instrumental/Solvent	
Negative Control Result	Pass	
Solvent	MeOH	
Remarks	No Remarks	

GC-MS Analysis : Run # 1 - Set # 2 0 1		Analyst: XNLIU (2019.10.16)
Equipment : DEA 361346		
Negative Control Run	No	
Sample Weighed	No	
Solvent	MeOH	
Retention Time Matching	No	
Remarks	No Remarks	

Spectral Result	
Constituent	Comments
Cocaine, Salt Undetermined	---

GC-MS Analysis : Run # 1 - Set # 3 0 2		Analyst: XNLIU (2019.10.16)
Equipment : DEA 361346		
Negative Control Run	No	
Sample Weighed	No	
Solvent	MeOH	
Retention Time Matching	No	
Remarks	No Remarks	

Spectral Result	
Constituent	Comments
Cocaine, Salt Undetermined	---

» I.A. Case #: REDACTED / LIMS Case #: 2019-SFL6-05255

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	10 bundle(s) containing white powder	SSEE (1507331)

GC-MS Analysis : Run # 1 - Set # 4 0 3

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361346

Negative Control Run	No
Sample Weighed	No
Solvent	MeOH
Retention Time Matching	No
Remarks	No Remarks

Spectral Result

Constituent	Comments
Cocaine, Salt Undetermined	---

GC-MS Analysis : Run # 1 - Set # 5 0 4

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361346

Negative Control Run	No
Sample Weighed	No
Solvent	MeOH
Retention Time Matching	No
Remarks	No Remarks

Spectral Result

Constituent	Comments
Cocaine, Salt Undetermined	---

GC-MS Analysis : Run # 1 - Set # 6 0 5

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361346

Negative Control Run	No
Sample Weighed	No
Solvent	MeOH
Retention Time Matching	No
Remarks	No Remarks

Spectral Result

Constituent	Comments
Cocaine, Salt Undetermined	---

GC-MS Analysis : Run # 1 - Set # 7 0 6

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361346

Negative Control Run	No
Sample Weighed	No
Solvent	MeOH
Retention Time Matching	No
Remarks	No Remarks

Spectral Result

Constituent	Comments
Cocaine, Salt Undetermined	---

» I.A. Case #: REDACTED / LIMS Case #: 2019-SFL6-05255

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	10 bundle(s) containing white powder	SSEE (1507331)

GC-MS Analysis : Run # 1 - Set # 8 0 7

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361346

Negative Control Run	No
Sample Weighed	No
Solvent	MeOH
Retention Time Matching	No
Remarks	No Remarks

Spectral Result

Constituent	Comments
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Cocaine, Salt Undetermined	---
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GC-MS Analysis : Run # 1 - Set # 9 0 8

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361346

Negative Control Run	No
Sample Weighed	No
Solvent	MeOH
Retention Time Matching	No
Remarks	No Remarks

Spectral Result

Constituent	Comments
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Cocaine, Salt Undetermined	---
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GC-MS Analysis : Run # 1 - Set # 10 0 9

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361346

Negative Control Run	No
Sample Weighed	No
Solvent	MeOH
Retention Time Matching	No
Remarks	No Remarks

Spectral Result

Constituent	Comments
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Cocaine, Salt Undetermined	---
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GC-MS Analysis : Run # 2 - Set # 1 0

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361346

Negative Control Run	Yes
Negative Control Type	Instrumental/Solvent
Negative Control Result	Pass
Solvent	MeOH
Remarks	No Remarks

» I.A. Case #: REDACTED / LIMS Case #: 2019-SFL6-05255

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	10 bundle(s) containing white powder	SSEE (1507331)

GC-MS Analysis : Run # 2 - Set # 2 1

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361346

Negative Control Run	No
Sample Weighed	No
Solvent	MeOH
Retention Time Matching	No
Remarks	No Remarks

Spectral Result

Constituent	Comments
Cocaine, Salt Undetermined	---

Scotts Color Test : Run # 1 - Set # 1 0

Analyst: XNLIU (2019.10.16)

Negative Control Run	Yes
Negative Control Result	Pass
Remarks	Lot#: SCOTT-G2- 092917

Scotts Color Test : Run # 1 - Set # 2 units 1-9

Analyst: XNLIU (2019.10.16)

Negative Control Run	No
Color in Solution A	Blue
Color after HCl addition	Blue
Color in Reagent/Chloroform	Pink Top Layer/Blue Bottom Layer
Remarks	Lot#: SCOTT-G2- 092917; results apply to all 9 units.

Composite Weight

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361267

Reserve Composite Weighed	Yes
Composite Weight	15.59 g
Reserve Composite Weight	15.25 g
Amount Composite Used	0.34 g
Remarks	Composite weight task was finalized with some delay.

FTIR Analysis : Run # 1 - Set # 1 0

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361377

Negative Control Run	Yes
Background	Pass
Negative Control Type	Instrumental
Negative Control Result	Pass
Remarks	No Remarks

» I.A. Case #: REDACTED / LIMS Case #: 2019-SFL6-05255

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	10 bundle(s) containing white powder	SSEE (1507331)

FTIR Analysis : Run # 1 - Set # 2 1

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361377

Negative Control Run	No
Sample Prep	direct
Remarks	No Remarks

Spectral Result

Constituent	Comments
Cocaine Hydrochloride	---

Reserve Weight

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361267

Residue?	No
Type of Calculation	No Calculation
Reserve Weight	10039.18 g
Remarks	11 new zpbs

Description of Reserve Evidence

Analyst: XNLIU (2019.10.16)

Description	Reserve evidence sealed in 10 new zpb(s); reserve composite sealed in 1 new zpb. All the above sealed in the original SSEE. Wrappings sealed in 4 new zpbs; sealed in two new SSEE's (2/each) <FP>. Special program sample(s) sealed in 3 glass vial(s); sealed in 1 new zpb; sealed in One New SSEE (CSP).
Date Sealed	2019-10-16
Remarks	No Remarks

Gross Weight After Analysis

Analyst: XNLIU (2019.10.16)

Equipment : DEA 361249

Gross Weight After Analysis	10324.2 g
Remarks	No Remarks

Summary of Findings

Analyst: XNLIU (2019.10.16)

Findings					
Exhibit	Gross Wt	Net Wt (Reported)	Net Wt	Reserve Wt	Retained Wt
1	11.74 kg	10044.4 g ± 0.6 g	10044.5 g ± 0.60152 g	10039.1 g	
Constituent	Purity	APD (Reported)	APD		
Cocaine Hydrochloride					

Fountainhead

Analyst: XNLIU (2019.10.16)

Description of Impression/Marking/Logo	Hand written "Manzana" on the wrapping; and "N", "B", an apple picture embossed on the brick
Color and/or Type of Package	clear food saver bag outlayer of multi-layered packagings.
Number of Packages	10
Remarks	no

» I.A. Case #: REDACTED / LIMS Case #: 2019-SFL6-05255

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	10 bundle(s) containing white powder	SSEE (1507331)

Exemplar Weight Removed

Analyst: XNLIU (2019.10.16)

Amount of Exemplar Removed 3.15 g

» I.A. Case #: REDACTED / LIMS Case #: 2019-SFL6-05255

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	Fingerprint evidence.	SSEE (1557747)

Description of Reserve Evidence

Analyst: XNLIU (2019.10.15)

Description	Fingerprint evidence.
Date Sealed	2019-10-15
Remarks	No Remarks

Gross Weight - SP/LP

Analyst: XNLIU (2019.10.15)

Equipment : DEA 361267

Gross Weight	944.59 g
Remarks	No Remarks

» I.A. Case #: REDACTED / LIMS Case #: 2019-SFL6-05255

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	Fingerprint evidence.	SSEE (1557749)

Description of Reserve Evidence

Analyst: XNLIU (2019.10.15)

Description Fingerprint evidence.

Date Sealed 2019-10-15

Remarks No Remarks

Gross Weight - SP/LP

Analyst: XNLIU (2019.10.15)

Equipment : DEA 361267

Gross Weight 828.73 g

Remarks No Remarks

» I.A. Case #: REDACTED / LIMS Case #: 2019-SFL6-05255

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	CSP	SSEE (1557755)

CSP Sample Weight		Analyst: XNLIU (2019.10.16)
Equipment : DEA 361267		
Number of Samples	3	
CSP Total Sample Weight	3.15 g	
CSP Average Sample Weight	1.05 g	
Remarks	No Remarks	

Description of Reserve Evidence		Analyst: XNLIU (2019.10.16)
Description	CSP	
Date Sealed	2019-10-15	
Remarks	No Remarks	

Gross Weight - SP/LP		Analyst: XNLIU (2019.10.16)
Equipment : DEA 361267		
Gross Weight	108.14 g	
Remarks	No Remarks	